

Effect of potassium, boron and zinc on nitrogen content in bast and core fibres for two kenaf varieties (*Hibiscus cannabinus*L.)

ABSTRACT

The purpose of this project was to determine the meaning of the potassium, boron and zinc on the nitrogen content and relation between the rate of nitrogen content and kenaf fiber yield. Two varieties of kenaf, namely; FHH 925 and 4383, were planted on 26 September 2013. Different levels of potassium as muriate of potash, boron as borax and zinc as zinc chloride applied to the plants. The samples selected from five plants in each plot and nitrogen contents in core and bast fibers analyzed. The best nitrogen content, fresh stem yield, dry stem yield, dry bast yield and dry core yield were achieved from FHH 925 variety when potassium added at a level of 150 kg/ha. For 4383 variety, the best result for nitrogen content was when potassium, boron and zinc used at 150, 1.0 and 5.0 kg/ha, respectively. While the other best parameters of fiber yield found when potassium added alone at the rate of 100kg/ha. In fact, the result of this variety was not too much different from the control treatment (not added any potassium, boron and zinc). The findings revealed that potassium fertilizer was certainly necessary for the both kenaf varieties in order to obtain the highest nitrogen content in the fiber that later will determine the quality of the kenaf fiber.

Keyword: Fiber yield; Nitrogen content; Fertilizer recommendation rate; Fiber quality